Paul J. Hurtado

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Updated: October 10, 2020

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POSITIONS

Assistant Professor – University of Nevada, Reno   Jan 2015 – Present
Department of Mathematics & Statistics;
Faculty Member: Ecology, Evolution, & Conservation Biology Ph.D. Program   Mar 2015 – Present

Postdoctoral Fellow – The Ohio State University   Sept 2011 – Aug 2014
Mathematical Biosciences Institute & Aquatic Ecology Laboratory

EDUCATION

Ph.D. Applied Mathematics – Cornell University   Jan 2012
Center for Applied Mathematics
Committee: Stephen P. Ellner, Advisor (Applied Mathematics, Ecology & Evolutionary Biology)
    Richard Rand (Mathematics) & André Dhondt (Ecology & Evolutionary Biology)

M.S. Applied Mathematics – Cornell University   May 2007
Center for Applied Mathematics

B.S. Mathematics; B.S. Biology & Chemistry – University of Southern Colorado   Dec 2002

Pueblo Central High School, Pueblo, CO   June 1998

RESEARCH INTERESTS

I use techniques from dynamical systems, stochastic processes, probability and statistics to develop and analyze mathematical models of biological systems to address questions in ecology, epidemiology and immunology. I also pursue interesting mathematical questions that emerge from such work.

PUBLICATIONS [1]

Submitted and In Preparation

1. **Hurtado, P.J.**, [†]Richards, C. 2020. Finding Reproduction Numbers for Epidemic Models & Predator-Prey Models of Arbitrary Finite Dimension Using The Generalized Linear Chain Trick. arXiv:2008.06768 (*in prep*)

2. **Hurtado, P.J.**, [†]Richards, C. 2020. Time Is Of The Essence: Incorporating Phase-Type Distributed Delays And Dwell Times Into ODE Models. arXiv:2008.01318 (*submitted*)

3. **Hurtado, P.J.**, [†]Richards, C. 2020. Building Mean Field State Transition Models Using The Generalized Linear Chain Trick and Continuous Time Markov Chain Theory. arXiv:2007.03902 (*submitted*)

Published

4. **Hurtado, P.J.** 2020. "Building New Models: Rethinking and Revising ODE Model Assumptions". In: Callender Highlander H., Capaldi A., Diaz Eaton C. (eds) An Introduction to Undergraduate Research in Computational and Mathematical Biology. Foundations for Undergraduate Research in Mathematics. Birkhäuser, Cham. doi:10.1007/978-3-030-33645-5_1

5. **Hurtado P.J.**, [†]Kirosingh A. 2019. Generalizations of the 'Linear Chain Trick': Incorporating more flexible dwell-time distributions into mean field ODE models. *Journal of Mathematical Biology.* 79, 1831-1883 doi:10.1007/s00285-019-01412-w

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[1]Student authors indicated by a superscript † (undergrad) or ‡ (grad).

6. ‡Slinn H., Richards L., Dyer L., **Hurtado P.J.**, Smilanich M. 2018. Across multiple species, phytochemical diversity and herbivore diet breadth have cascading effects on herbivore immunity and parasitism in a tropical model system. *Frontiers in Plant Science.* 9:656. doi:10.3389/fpls.2018.00656

7. Dyer L., ‡Philbin C., ‡Ochsenrider K., Richards L., Massad T., Smilanich A., Forister M., Parchman T., ‡Galland L., **Hurtado P.J.**, ‡Espeset A., ‡Glassmire A., ‡Harrison J., ‡Mo C., ‡Yoon S., Pardikes N., ‡Muchoney N., Jahner J., ‡Slinn H., Shelef O., Dodson C., ‡Kato M., ‡Yamaguchi L., Jeffrey C. 2018. Modern Chemical Ecology Theory for Plant Insect Interactions. *Nature Reviews Chemistry*, 2, 50–64. doi:10.1038/s41570-018-0009-7

8. ‡Pardikes N., ‡Lumpkin W., **Hurtado P.J.**, Dyer, L. 2018. Simulated tri-trophic networks reveal complex relationships between species diversity and interaction diversity. *PLOS ONE* 13(3): e0193822. doi:10.1371/journal.pone.0193822

9. Osnas E., **Hurtado P.J.**, Dobson A. 2015. Evolution of Pathogen Virulence Across Space During an Epidemic. *The American Naturalist.* 185(3):332-342. doi:10.1086/679734

10. **Hurtado P.J.**, Hall S, Ellner SP. 2014. Infectious disease in consumer populations: dynamic consequences of resource-mediated transmission and infectiousness. *Journal of Theoretical Ecology* May 2014, 7(2):163-179. doi:10.1007/s12080-013-0208-2

11. **Hurtado P.J.** 2012. Within-Host Dynamics of Mycoplasma Infections: Conjunctivitis in Wild Passerine Birds. *Journal of Theoretical Biology*, 306:73-92. doi:10.1016/j.jtbi.2012.04.018.

12. ‡Simpson J., **Hurtado P.J.**, Medlock J., Molei G., Andreadis T.G., Galvani A., Diuk-Wasser M. 2011. Vector host-feeding preferences drive transmission of multi-host pathogens: West Nile virus as a model system. *Proc. R. Soc. B.* 279(1730):925-933. doi:10.1098/rspb.2011.1282

13. **Hurtado P.J.** 2008. The Potential Impact of Disease on the Migratory Structure of a Partially Migratory Passerine Population. *Bull Math Biol*, 70(8):2264-82. doi:10.1007/s11538-008-9345-y

14. **Hurtado P.J.** Probable Black Swift (*Cypseloides niger*) Nesting Colony Found in the Wet Mountains, Pueblo County. *Journal of the Colorado Field Ornithologists*, 36(2) April 2002.

Other Publications

15. **Hurtado P.J.**, Mejran M., Morales T., Schwager D., Lanham M. 2002. Chronic Wasting Disease: The Effects of Environmental Prion Density and Interactions between Populations on Disease Dynamics. MTBI Technical Paper, Article #BU-1617-M. (PDF at `https://mtbi.asu.edu/2002-6`)

16. Cunningham C., **Hurtado P.J.**, Watson H., Karev G. 2001. Different Strokes for Different Folks: The Evolution of the Distribution of Traits within Heterogeneous Populations. MTBI Technical Paper, Article #BU-1580-M. (PDF at `https://mtbi.asu.edu/2001-4`)

17. Loeffler C.W. 2001. First Pueblo County Record of Smooth Green Snake (*Liochlorophys vernalis*). *Herpetological Review* 32(1), pp 60. [Documentation by **P.J. Hurtado** and M. DiMatteo]

GRANTS RECEIVED

NSF DEB #1929522. **Collaborative research: Novel trophic interactions determined by phytochemistry, pathogen infection, and parasitoids.** PI: Angela Smilanich. CoPI: PJH, Matt Forister, Lee Dyer, Michael Teglas (collaboration with #1929544, PI: M. Deane Bowers). 1 Sept 2019 – 31 Aug 2023.

Sloan Scholars Mentoring Network Seed Grant (PI). **Incorporating More Flexible Delay Distributions Into Ordinary Differential Equations (ODE) Models.** Total Funding: $10,000 (Submitted 1 Aug 2018; Funding began Oct, 2018)

RESEARCH AWARDS TO STUDENT MENTEES

Nevada Undergraduate Research Award to **Gilbert, Jace**. *Parameter Estimation in Dynamical Systems.* Total Funding: $1070 (Aug, 2016 - May, 2017). Faculty Mentor: **P.J. Hurtado**

Nevada Undergraduate Research Award to **Medina, Catalina**. *Mechanistic modeling of Mycoplasma gallisepticum infections in the House Finch (Haemorhous mexicanus).* Total Funding: $1800 (27 Aug, 2018 - 31 May, 2019). Faculty Mentor: **P.J. Hurtado**

STUDENT RESEARCH SUPERVISED

Graduate Research
Arturo Macias Franco (Thesis advisor, Statistics & Data Science M.S., UNR; 2020 - present)
Jillian Kiefer (Thesis advisor, Mathematics M.S., UNR; 2019 - present)
Amy Robards (Thesis advisor, Mathematics M.S., UNR; 2017 - 2019)
Project Leader, MBI-NIMBioS-CAMBAM 2013 Summer Graduate Program
Project Assistant, MBI-NIMBioS-CAMBAM 2012 Summer Graduate Program

Undergraduate Research
Wei Deng (Research advisor) – Fall 2020.
Cameron Richards (Research advisor) – Fall 2019 - present.
Catalina Medina (Secondary-advisor, Deena Schmidt; McNair Scholar) – Fall 2017 - present.
Narae Wadsworth (Secondary-advisor, Deena Schmidt) – Fall 2017 - Summer 2018.
Jace Gilbert (Research advisor; 2017 - 2018; Funded by an internal NURA award; Ph.D. candidate, UNC Chapel Hill).
Adam Kirosingh (Research advisor; 2017 - 2018; Currently: Ph.D. candidate, Stanford University)
Amanda Fredrickson (Primary-advisor, Deena Schmidt; Honors Thesis – Fall 2016 - May 2017)
Project Assistant, University of Akron, 2007 Summer REU - Akron, OH (Organizer: Deena R. Schmidt)

INVITED TALKS

SACNAS 2020 National Diversity in STEM Conference. *online* - 22 October 2020.

Guest Lecturer: History of Mathematics. *Colorado State University - Ft. Collins* - 13 October 2020.

Intercollegiate Boimathematics Alliance (IBA) Webinar on Modeling the Impact of Non-pharmaceutical Interventions on COVID-19. *online* - 10 October 2020.

ICMA VII: Seventh International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems. Phoenix, Arizona - 12 October 2019.

SACNAS 2019 National Diversity in STEM Conference. Honolulu, Hawaii - 2 November 2019.

International Conference on Applications of Mathematics to Nonlinear Sciences. Pokhara, Nepal - 29 June 2019

SIAM Conference on Dynamical Systems. Snowbird, UT - May 2019.

Mathbio Seminar, University of Tennessee, Knoxville. Knoxville, TN - February 2019

Math-Bio Seminar, Virginia Tech, Richmond, VA - 12 Sept 2018

SIAM Conference on Uncertainty Quantification: Session on Exploring the Links Between Parameter Sensitivity, Identifiability, and Uncertainty Quantification. Garden Grove, CA - 16 April 2018

AMS Sectional Meeting in Portland, OR: Special Session: Biomathematics – Progress and Future Directions. Portland, OR - 14 April 2018

Society for Mathematical Biology Annual Meeting: Session on Confronting Biological Models with Data. Salt Lake City, UT - 20 July 2017

Mathematics & Statistics Colloquium, UNR. Reno, NV - 29 September 2016.

The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications. Orlando, FL - July 4 2016.

Keynote Speaker, Undergraduate Research Symposium.
Colorado State University - Pueblo, Pueblo, CO - 22 October 2015

RUSIS Summer REU Guest Lecture. Reno, NV - 24 July 2015

MathFest 2014: Mathematical Epidemiology Invited Paper Session.
Portland, OR - 7 August, 2014

Mathematics & Statistics Research Colloquium.
Utah State University, Logan, UT - 27 March, 2014

From Within Host Dynamics to the Epidemiology of Infectious Disease (MBI Workshop).
Mathematical Biosciences Institute, Columbus, OH - 8 April, 2014

Biomathematics Seminar Series. Trinity University, San Antonio, TX - 13 November, 2013

MBI-NIMBioS-CAMBAM Summer Graduate Workshop
NIMBioS, University of Tennessee, Knoxville - 18-21 June, 2013

Science Lecture Series. Ohio Wesleyan University, Delaware, OH - 28 March, 2013

Hancock County Naturalists. Oakwoods Nature Preserve, Findlay, OH - 14 March, 2013

Science Lecture Series. Ohio Wesleyan University, Delaware, OH - 1 November, 2012

Mathematics & Computer Science Department Seminar
Ohio Wesleyan University, Delaware, OH - 1 November, 2012

Ecology (EEOB 3410) Guest Lecture. The Ohio State University, Columbus, OH - 18 October, 2012

SACNAS National Conference: Up-to-the-minute Reports on Mathematical Epidemiology.
Seattle, WA - 12 October, 2012

Modern Mathematics Workshop, SACNAS National Conference (MBI Representative)
Seattle, WA - 10 October, 2012

Battelle Lecture Series. Capital University, Columbus, OH - 13 September, 2012

East Central Ohio Audubon Society Annual Meeting
College Town House, Granville, OH - 11 June, 2012

American Society for Information Science & Technology, Central Ohio Chapter
Grange Insurance Audubon Center, Columbus, OH - 7 June, 2012

RUMBA Seminar. The Ohio State University, Columbus, OH - 10 January, 2012.

European Conference on Mathematical and Theoretical Biology
Krakow, Poland - 28 June, 2011

Science Lecture Series. Ohio Wesleyan University, Delaware, OH - 30 October, 2008

Pan American Sciences Institute 2006.
Universidad De El Salvador, San Salvador, El Salvador - July, 2006

CONTRIBUTED TALKS & OTHER PRESENTATIONS

SMB Annual Conference 2019 (*online poster*) - 17-19 August 2020

Workshop: Mathematical & Computational Methods in Biology (Talk) Mathematical Biosciences Institute at The Ohio State University. 6 May 2020.

SMB Annual Conference 2019 (Talk) Montreal, QC, Canada - 22 July 2019

17th Annual Meeting on Ecology and Evolution of Infectious Disease. Princeton University, Princeton, NJ - June 12, 2019.

SACNAS 2018 (Minisymposium Speaker & Organizer). San Antonio, TX - 12 Oct 2018

ESA Annual Meeting 2018 (Poster) New Orleans, LA - 10 August 2018

Dynamics Days 2018 (Poster) Denver, CO - 5 January 2018

SIAM Conference on Dynamical Systems (Talk) Snowbird, UT - 25 May 2017.

SIAM Conference on Dynamical Systems (Poster)
Snowbird, UT - 24 May 2017. (Presented by student co-author Jace Gilbert)

Population Models in the 21st Century [Workshop 4] (Poster)
Mathematical Biosciences Institute at The Ohio State University. Nov 14, 2016.

Ecology and Evolution of Infectious Disease (EEID) Annual Conference. (Poster)
Cornell University, Ithaca, NY - 4 June 2016

MBI Postdoc Seminar (Talk) Mathematical Biosciences Institute (MBI), OSU, Columbus, OH - 6 Feb 2014

International Association for Great Lakes Research (IAGLR) 2013 Annual Conference (Talk)
Purdue University, West Lafeyette, IN - 3 June, 2013

MBI Postdoc Seminar (Talk)
Mathematical Biosciences Institute (MBI), OSU, Columbus, OH - 6 December, 2012

Ecology and Evolution of Infectious Diseases Conference (Poster)
University of Michigan, Ann Arbor, MI - May, 2012

MBI Postdoc Seminar (Talk)
Mathematical Biosciences Institute (MBI), OSU, Columbus, OH - 19 January, 2012

Workshop for Young Researchers in Mathematical Biology (Poster)
Mathematical Biosciences Institute (MBI), OSU, Columbus, OH - 31 August, 2011

Ecological Society of America Annual Meeting (Talk). Austin, TX - 12 August, 2011

MBI Postdoc Seminar (Talk)
Mathematical Biosciences Institute (MBI), OSU, Columbus, OH - 21 April, 2011

Institute Partners Meeting (Poster)
Mathematical Biosciences Institute (MBI), OSU, Columbus, OH - 6 February, 2011

Ecology and Evolution of Infectious Diseases Conference (Poster)
Cornell University, Ithaca, NY - June, 2010

Ecology and Evolution of Infections and Disease, Cornell Retreat (Short Talk)
Ithaca, NY - 2 October 2009.

SIAM Life Sciences 2009 Annual Conference (Minisymposium Speaker)
Denver, CO - July 2009.

Mathematical Biology Workshop (Poster). University of Utah - May 2009

2008 Workshop for Young Researchers in Mathematical Biology (Poster)
Mathematical Biosciences Institute (MBI), OSU, Columbus, OH. Sept 2-4, 2008

SIAM Life Sciences 2008 Annual Conference (Minisymposium Speaker)
Montreal, QC - July 2008

Ecology and Evolution of Infectious Diseases Conference (Poster)
Cornell University, Ithaca, NY - June, 2007

Math Sciences Colloquium (Talk) Center for Applied Mathematics, Cornell University - March 1, 2007

HONORS AND AWARDS

Westfall Scholar Mentor Award, UNR College of Science - Fall 2017
Nominated for the Lee A. Segel Award for Best Student Research Paper (2008-2009)
Cornell University Provost's Diversity Fellowship - Fall 2008
Cornell University SAGE Fellowship, Fall 2005 - Spring 2006
SLOAN Graduate Fellowship, Fall 2003 - Spring 2005
Outstanding Mathematics Graduate, University of Southern Colorado (USC), Fall Class of 2002.
Certificate of Achievement for contributions to USC & the Experiential Learning Center, April 2002.
Colorado Mathematics Award: 3rd Place, William Lowell Putnam Mathematical Competition, 2000.
USC Excellence Awards in Organic Chemistry (1999-2000); General Chemistry (1998-1999).

TEACHING EXPERIENCE

Course Instructor (UNR)

Fall 2020	**Probability Theory (STAT 461/661)**
	Precalculus I (MATH 126)
	First Year Experience I: Science and Mathematics (SCI 110)
Spring 2020	**Probability Theory (STAT 461/661)**
	Nonlinear Dynamics and Chaos II (MATH 722)
Fall 2019	**Precalculus I (MATH 126)**
	Nonlinear Dynamics and Chaos I (MATH 721)
Spring 2019	**Precalculus I (MATH 126)**
Fall 2018	**Precalculus I (MATH 126)**
	First Year Experience I: Science and Mathematics (SCI 110.1010)
Spring 2018	**Mathematical Modeling (MATH 420/620)**
	Topics in Applied Analysis (MATH 429)
Fall 2017	**Mathematical Modeling (MATH 420/620)**
Spring 2017	**Nonlinear Dynamic and Chaos II (MATH 722)**
Fall 2016	**First Year Experience I: Science and Mathematics (SCI 110.1010)**
	Nonlinear Dynamic and Chaos I (MATH 721)
Spring 2016	**Applied Regression (STAT 757)**
Fall 2015	**Mathematical Modeling (MATH 420/620)**
Spring 2015	**Probability Theory (MATH 461/661; UNR)**

Course Instructor (Previous Institutions)

Fall 2013	**Foundations of Quantitative Ecology (EEOB 8896.1; OSU)**
Responsibilities:	Taught basic programming and modeling to Ecology & Evolution graduate students.
	Curriculum and resource development, lectures, and weekly computer labs in R.
Fall 2009	**Ecological design and analysis I: programming in R (BioEE 7600; Cornell)**
Responsibilities:	Taught basic programming, statistical concepts to biology graduate students.
	Curriculum and resource development; Lecture and computer labs twice a week.
	Course goals: R programming basics, foundational mathematics, maximum likelihood.
Fall 2007	**Finite Mathematics (Math 105)**
Responsibilities:	Lecture 3 sessions per week; create exams, quizzes and worksheets; assign final grades
	Managed an undergraduate grader; Maintained course website; Weekly office hours
	Used MapleTA for HW assignments and communication with students
2006, 2007	**Calculus I (Math 111)**
Responsibilities:	Lecture 3 sessions per week; create exams, quizzes and worksheets; assign final grades
	Used MapleTA for online pre-class HW assignments and communication with students
	Held weekly office hours and managed an undergraduate grader

Workshop Instructor

Oct 2016   **Introduction to LaTeX and TexStudio** at UNR
Responsibilities: Organizer & Instructor. Introduced the basics, and showcased some advanced examples.

Apr 2016   **Introduction to Programming in R** at UNR
Responsibilities: Organizer & Instructor. Introduced the programming basics, and showcased advanced examples.

Apr 2015   **Introduction to LaTeX and TexStudio** at UNR
Responsibilities: Organizer & Instructor. Introduced the basics, and showcased some advanced examples.

May 2014   **NIMBioS Tutorial: Parameter Estimation for Dynamic Biological Models**
Responsibilities: Co-organizer and Instructor.

June 2013   **MBI-NIMBioS-CAMBAM Summer Graduate Workshop**
Responsibilities: Taught basic statistical concepts and programming in R and Matlab.
Co-organized lectures during the first three days of the two-week workshop.

Teaching Assistant

Spring 2009   **Theoretical Ecology (BioEE 4600)**
Instructor: S. P. Ellner
Responsibilities: Assist with computer labs, grade homework and labs, and help create exam questions.
Provide feedback on student projects extending published models.

Spring 2008   **Dynamic Models in Biology (Math 362 / BioEE 362)**
Instructors: S. P. Ellner and J. Guckenheimer
Responsibilities: Office hours and study sessions, assist computer labs; grade homework, labs, and exams.

Winter 07/08   **Tropical Field Ornithology (BioEE 264)**
Instructor: A. A. Dhondt
Responsibilities: Co-lead field excursions near the Punta Cana field station in the Dominican Republic.
Mentored student field projects. Assisted capturing, measuring birds near the field station.
Facilitate classroom discussions of daily field observations and assigned reading.
Organized project presentations for Cornell's Ornithology Seminar.

Other Teaching Activities

April 2007,2008   **Expanding Your Horizons**
Workshop assistant (2007) and organizer (2008) to promote STEM to middle-school girls.

Aug 2003   **Mathematics Department TA Training**

PROFESSIONAL SERVICE

Conference, Workshop, Symposium & Seminar Organization

Minisymposium Organizer: Recent Advances from the Intersection of Biology, Mathematics, and Statistics. 2018 SACNAS Conference. 12 Oct 2018.

Local Organizing Committee, Society for Mathematical Biology (SMB) Annual Meeting. July 2017.

Organizing Committee, Great Basin Bird Conference. May 2017.

Minisymposium Organizer: Connecting Dynamic Models to Data: Estimation, Uncertainty, Related Statistical Methods (I and II). 2017 Conference on Dynamical Systems. 25 May 2017.

NIMBioS Tutorial: Parameter Estimation for Dynamic Biological Models, May 2014 (Co-organized with Marisa Eisenberg and Ariel Cintron-Arias)

MBI Scientific & Professional Development Seminar, 2013-2014 (Co-organized with Lucy Spardy)

2013 SIAM Workshop Celebrating Diversity, Minisymposium Organizer

MBI Scientific & Professional Development Seminar, 2012-2013 (Co-organized with Arjun Beri)

MBI Postdoc Seminar, 2011-2012 (Co-organized with Harsh Jain)

Python Tutorial Organizer. Center for Applied Mathematics, Cornell University - Spring 2005

Mentoring Activity

    2017 - present: Undergraduate Research Mentor, UNR

    2015 Mentor, ESA Mentoring Workshop for graduate students

    2013 MBI-NIMBioS-CAMBAM Summer Graduate Program, Project Leader.

    2012 MBI-NIMBioS-CAMBAM Summer Graduate Program, Project Assistant with Linda Allen.

    2007 Summer REU at University of Akron (OH), Project Assistant with Deena Schmidt.

Professional Memberships

    Society for Industrial and Applied Mathematics (SIAM), Society for Mathematical Biology (SMB), American Mathematical Society (AMS), Ecological Society of America (ESA), Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), American Ornithological Society (AOS), Wilson Ornithological Society (WOS)

Professional Development

    Multiple Grant Writing and Proposal Development Workshops at UNR, 2015-Present

    Regular interaction with staff and students at OSU's Aquatic Ecology Lab, 2011-2014

    Regular attendance at MBI workshops, postdoc seminars and colloquia, 2011-2014

    Fall 2013: Ecosystem Dynamics and Management workshops at the MBI.

    Math Biology: Looking at the Future (MBI's 10th Anniversary Meeting), September, 2012

    MBI Fall Semester Course: Topics in Mathematical Neuroscience, Fall, 2012

    Workshop for Young Researchers in Mathematical Biology, August 2012

    Workshop 5: Spatial Models of Micro and Macro Systems, April, 2012

    Workshop 4: Evolution and Spread of Disease, March, 2012

    CTW: Recent Advances in Statistical Inference for Mathematical Biology, Feb, 2012

    MBI Winter Course: An Invitation to Probability (Winter 2012)

    Workshop 2: Stochastic Processes in Cell and Population Biology, Oct, 2011

    CTW: Spatio-Temporal Dynamics in Disease Ecology And Epidemiology, Oct, 2011

    Workshop 1: New Questions in Probability Theory Arising from Biology, Sept, 2011

    MBI Autumn Course: Bifurcation Theory, Fall, 2011

Referee/Reviewer

    Bulletin of Mathematical Biology; Theoretical Ecology; Journal of Theoretical Biology; Journal of Biological Dynamics; Theoretical Population Biology; Journal of Biological Systems; Theory in Biosciences; SIAM Journal on Applied Mathematics; Chaos, Solitons, & Fractals; The American Naturalist; Ecology Letters; EcoHealth; Ecosphere; SPORA; PLoS ONE; Journal of Animal Ecology; The Lancet Infectious Diseases; Royal Society Interface.

Grant Proposal Reviewer

    National Science Foundation (NSF); Army Research Office (ARO); The Mississippi-Alabama Sea Grant Consortium; Colorado Field Ornithologists.

Other Service

    Member, SMB Committee on Diversity, Equity, & Inclusion (DEI), Oct 2020 - Present.

    Co-organizer: Math/Bio/Stats Chats, 2016 - Present. (Weekly drop-in mtg. for UNR grads & researchers)

    Recruiting for UNR Graduate programs at SACNAS Annual Conference, Oct 2018.

    Board of Directors, Great Basin Bird Observatory (GBBO), Nov 2016 - Present

    Nevada Bird Records Committee (NBRC) member. June 2015 - Mar 2019

    MBI Representative at SACNAS 2012, Seattle, WA.